

High Priority Facility Needs

A plan to address safety, security, capacity, and infrastructure needs

May 2018



Overview/ *addressing needs*

1) **Physical building upgrades**

What conditions should be addressed in the district's buildings and associated budgets?

2) **Capacity and expansion needs**

Addressing enrollment growth, capacity needs and eliminate modular units.

3) **Budget Overview**



Approach/*highest priorities*

Reviewed prior assessment

Conduct building assessments

Focus on only HIGHEST PRIORITIES

Focus on renewal of facilities
for the next twenty years

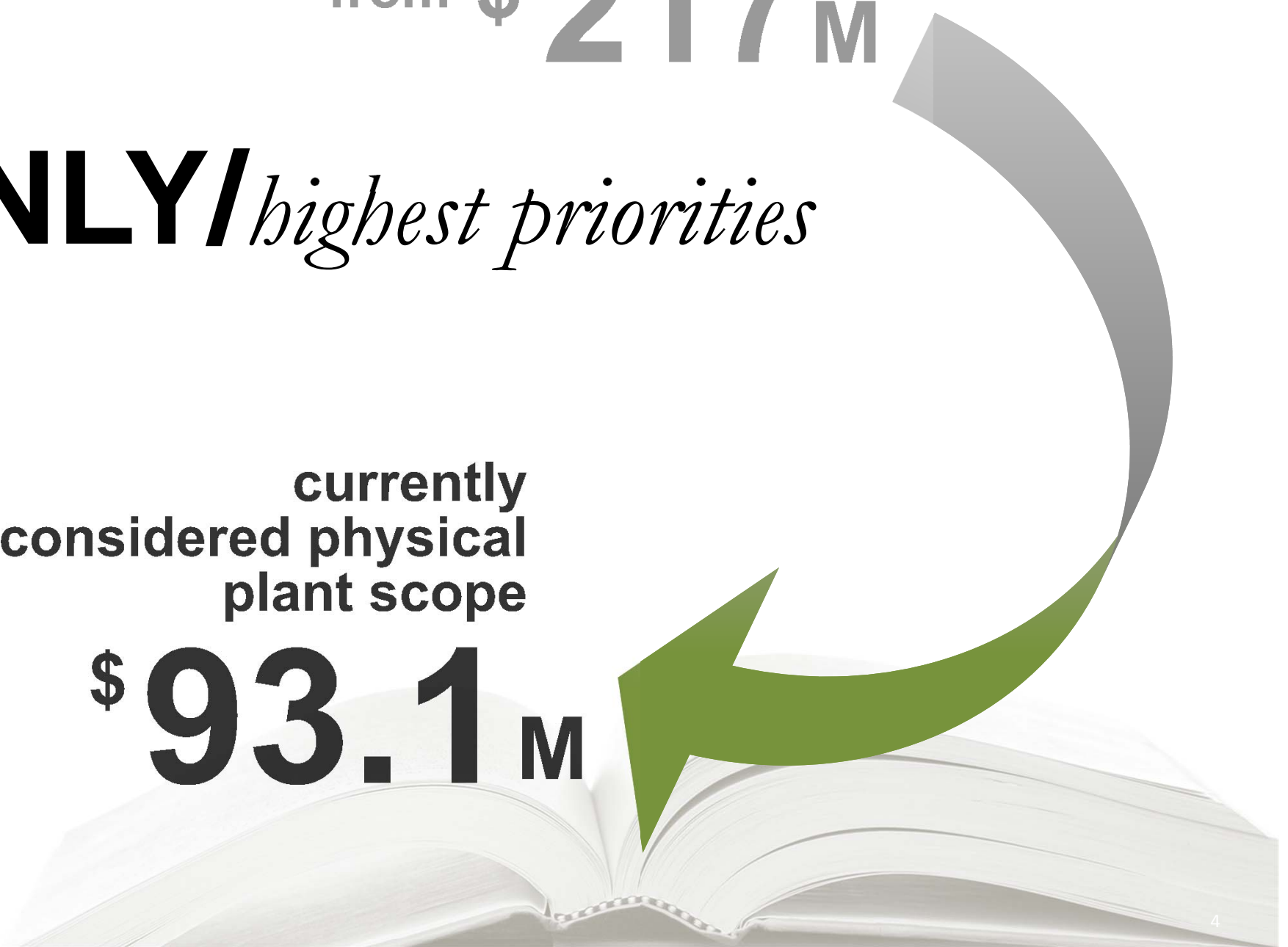
Develop expansion option to
address capacity needs

from \$ **217** M

ONLY / *highest priorities*

currently
considered physical
plant scope

\$ **93.1** M



\$ 5.3M

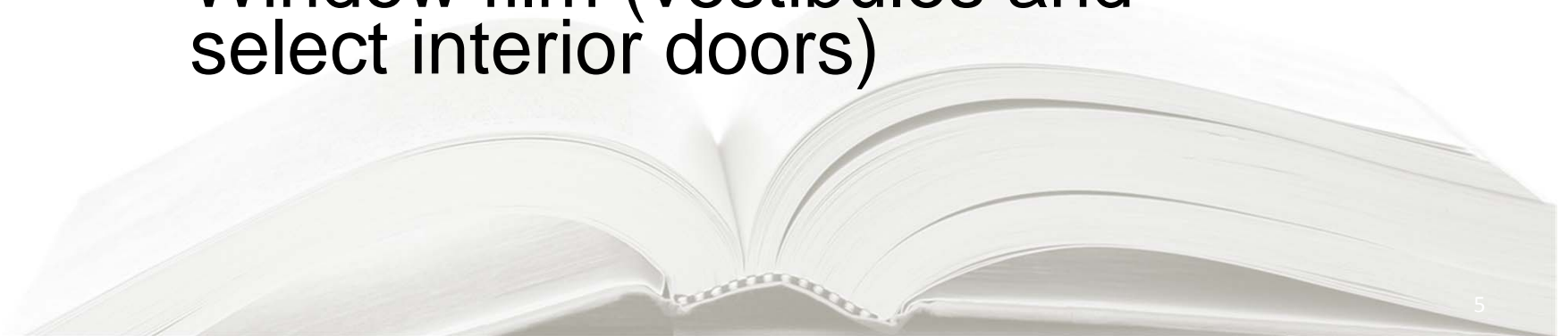
Security *various systems*

Impact ALL schools

CCTV systems

Secure vestibules with guest management systems

Window film (vestibules and select interior doors)



\$15.1M

Life Safety *critical*

Exterior steps; ramps

(Clinton, Jefferson, South Mountain, Seth Boyden)

Masonry repairs

Plaster repair/reinforcement

Window film – non-safety glass

(all schools)

Stair finishes; railings



\$ 5.6M

Roofing/ *out of warranty*

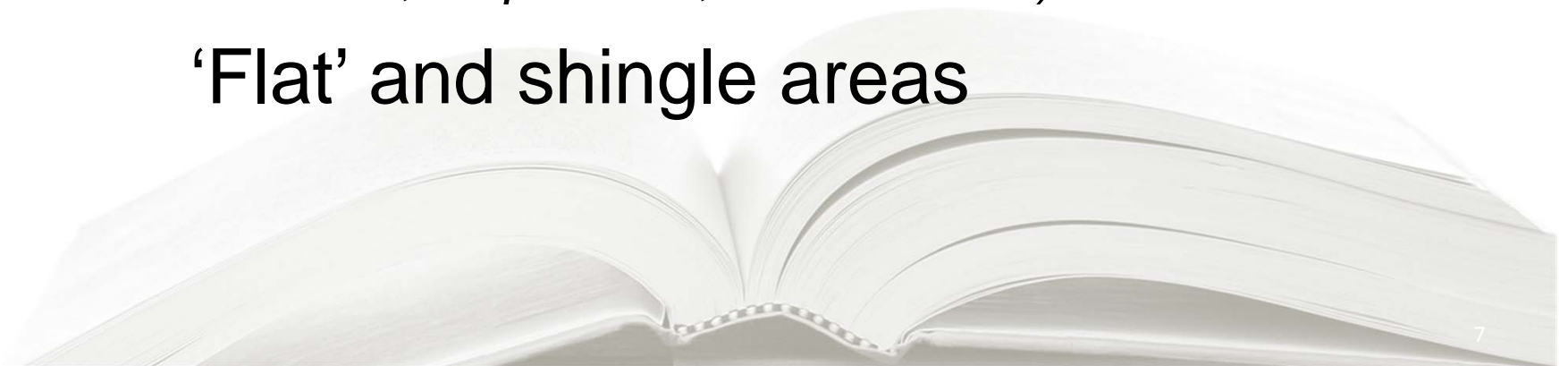
Areas at all schools

Fascia, soffits and gutters

Slate: replace w/artificial slate

*(Jefferson, Marshall, South Mountain, Seth Boyden,
Tuscan, Maplewood, Columbia HS)*

'Flat' and shingle areas



\$ 1.1 M

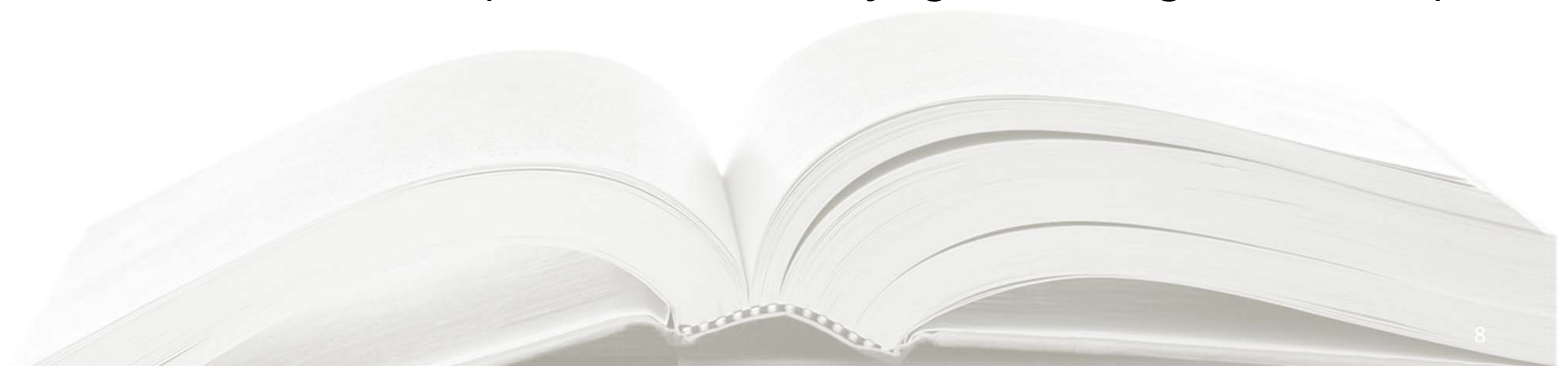
Windows/*doors & glass*

Operationally failing, un-repairable

Montrose *(limited: 8 locations)*

Tuscan *(limited: precast window sills and brick)*

Columbia HS *(locker room skylights and glass block)*



\$10.5M

Interiors/*renovations*

Toilet Partitions (*Tuscan*)

Wood (gym) Flooring
(*South Mountain, Columbia HS*)

Auditorium seating replacements
(*selective; Clinton*)

Renovations

Columbia HS: Pool infill, renovation

Columbia HS: Library renovation

Columbia HS: Science labs (14 locations)

\$ 8.2M

ADA Access*/focused*

Upgrade select buildings to enable accessibility (*Clinton, Middle Schools, HS*)

Entry, accessible route, bathrooms

Casework, doors, hardware, Signage

Nurse/Health suite upgrades

Other improvements



\$ 1.5M

Site/*various*

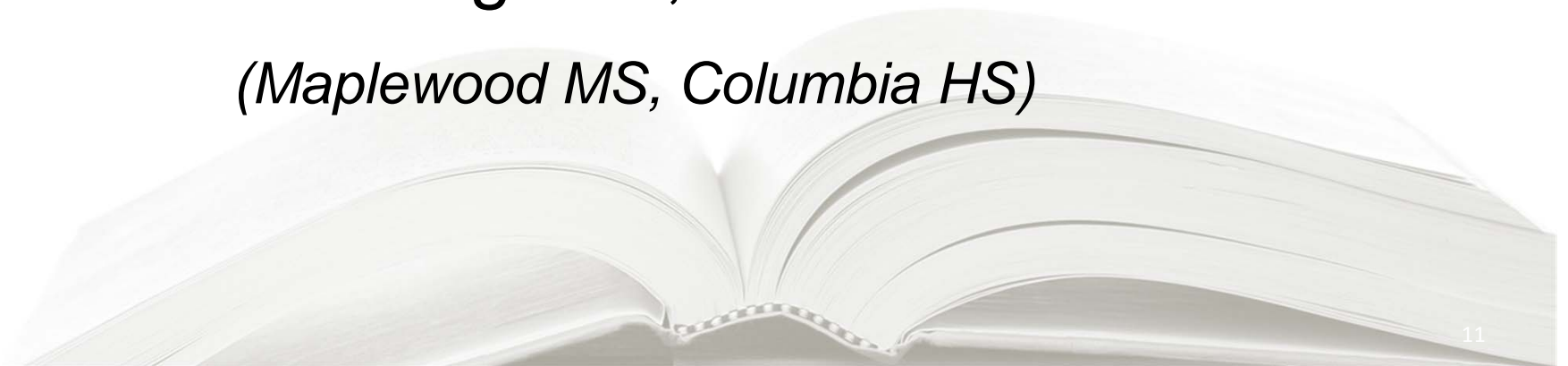
**Grading and drainage improvements
at various schools**

(all schools)

Bleachers at Underhill

Retaining wall, concrete stairs

(Maplewood MS, Columbia HS)



\$ 3.8M

Electrical *various*

Electrical panel upgrades

Electrical distribution and outlets

Intercom/clock replacement

*(Marshall, South Mountain, S. Mountain Annex,
Seth Boyden, Tuscan, Maplewood MS,
South Orange MS))*

Fire alarm upgrades *(South Mountain)*

\$41.0M

HVAC *mechanical*

Air handling, rooftop units, exhausts

Unit Ventilators in rooms

Fin-tube radiation repairs/replacements

Boilers and related work

Pumps and related systems

Piping insulation

Controls (local controls)

\$410k

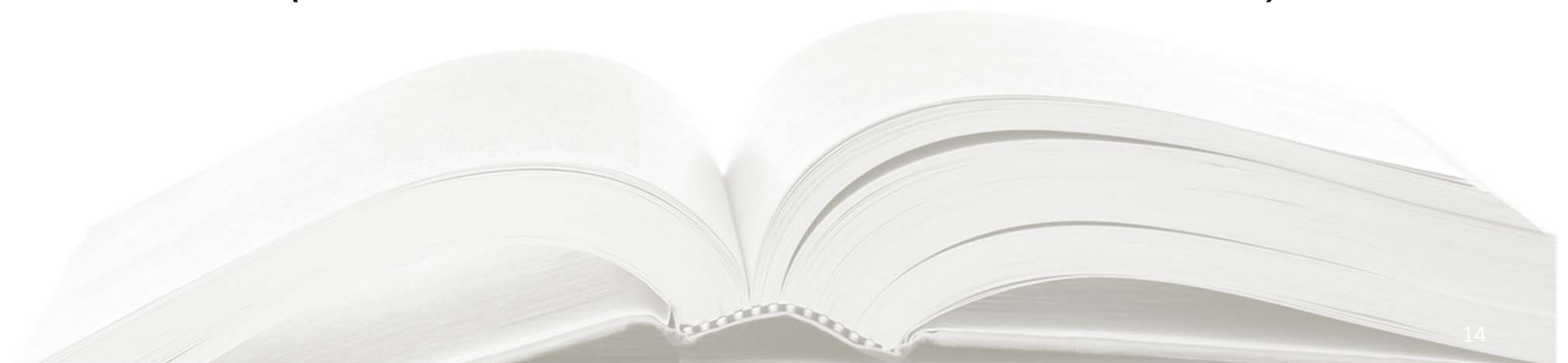
Plumbing/*various*

Hot water heaters

*(Clinton, Seth Boyden, Maplewood MS,
Columbia HS)*

Neutralization system

(Columbia HS – related to science labs)

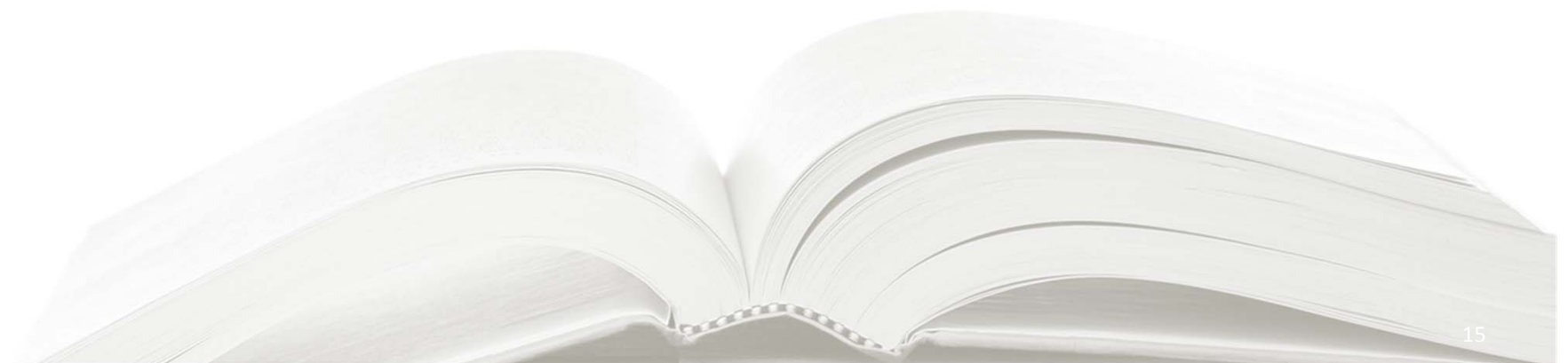


\$ 85k

Other/*various*

Transgender/unisex bathrooms

Renovations to create private
staff/personal rooms in each school



\$456k

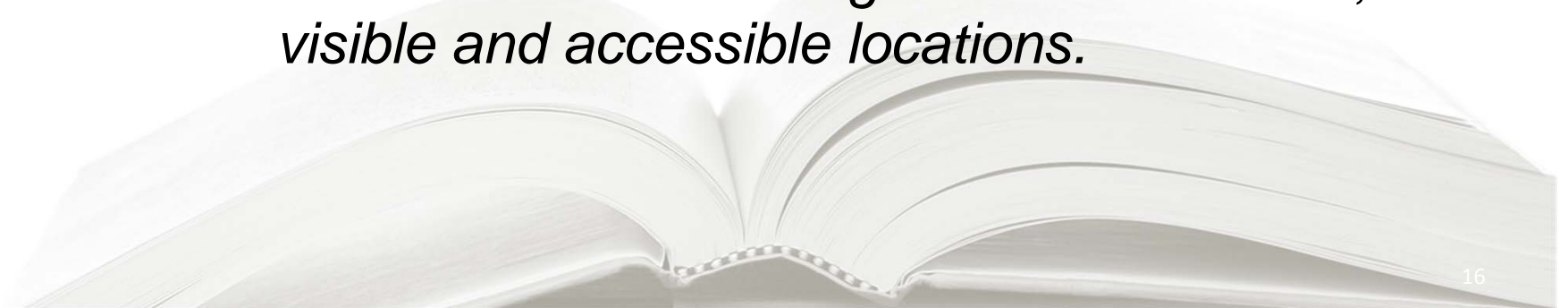
Abatement/*known conditions*

Insulation abatement

VAT flooring abatement, replacement

Other accessible/visible locations

NOTE: abatement budget limited to known, visible and accessible locations.





Plaster Ceilings/*various*

Various schools
Reinforcement proposed



Columbia HS/*plaster*



Columbia HS/ceilings



Columbia HS/insulation



S. Orange MS/ceiling • leaks

Secting Prompts

Unknown Vocabulary Strategies
What is the main idea of...



Maplewood MS/*stairs*



Tuscan/*roof*



Seth Boyden/*plaster*



Clinton / *rotted fascia*

Budget/ *totals*

Security	\$	5.3 M
Life Safety	\$	15.1 M
Roofing	\$	5.6 M
Windows	\$	1.1 M
Interiors	\$	10.5 M
ADA access	\$	8.2 M
Site	\$	1.5 M
Electrical	\$	3.8 M
HVAC	\$	41.0 M
Plumbing	\$	410 k
Other	\$	85 k
Abatement	\$	456 k

\$ 93.1 M

Enrollment/*capacity*

2

Existing	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UG	Total
2017-18	108	528	545	566	562	553	554	536	519	501	535	527	451	486	67	7038

	PK	K-5	6-8	9-12	Total
Existing Enrollment (w/ ungraded distributed)	109	3340	1571	2018	7038

Projected	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UG	Total
2022-23	79	550	563	565	564	555	536	535	554	552	575	527	509	463	68	7195

	PK	K-5	6-8	9-12	Total
Existing Enrollment (w/ ungraded distributed)	89	3372	1651	2083	7195

Variance [higher projected/(lower projected)]	(20)	32	80	65	157
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Impact of Pre-K increase to universe per Whitehall 99

Variance [higher projected/(lower projected)]	79	32	80	65	256
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Enrollment/capacity

2

School	Educational Capacity*	Existing Stations*	Modular Capacity	Existing Modularity	Existing Capacity	2021-22 Projection	+/- vs Adj. Cap.*	Option B (no modulars)	
								+ Stations	Tot. Stations
Elementary Schools	2901	153	349	16	3250	3461	(560)	PK; K-4	156
Clinton ES	446	23	81	4	527	539	(93)	3	26
Jefferson ES	477	25	0		477	14	463		25
Marshall ES	410	23	38	2	448	968	(558)		23
Seth Boyden ES	396	20	138	6	534	515	(119)		20
South Mountain/Annex	554	28	0		554	665	(111)		28
Tuscan ES	495	25	92	4	587	671	(176)		25
Montrose	122	9	0		122	89	33		9
Middle Schools	1741	90	0		1741	1651	90	5-6; 7-8	113
Maplewood MS	841	43	0		841	850	(9)	12	55
South Orange MS	900	47	0		900	801	99	11	58
High Schools	1854	104	0		1854	2083	(229)	9-12	113
Columbia HS	1854	104	0		1854	2083	(229)	9	113
Totals & Over/(Under)	6496	347	349	16	6845	7195	(700)	34	381

* Without modulars considered

Option/b

3

OPTION B

Grade Configuration						Added Capacity	Added Station*	Est. Add GSF	Other Est. added GSF	Est. SF Added
	PK	K-4	5-6	7-8	9-12					
Projected Enroll Capacity	89	2830	1081	1113	2083					
+/- cap vs enroll	33	(51)	(240)	(213)	(229)	732	34	46,600	15,200	61,800
School Capacity by School (ES shown at 90%; MS at 85%; HS at 75%)										
Montrose	PK	122								
Clinton ES	K-4	446				51	3	3,500		3,500
Jefferson ES	K-4	477								
Marshall ES	K-4	410								
Seth Boyden ES	K-4	396								
South Mountain	K-4	396								
S Mountain Annex	K-4	158								
Tuscan ES	K-4	495								
MMS	5-6		841			240	12	16,600	4,500	21,100
SOMS	7-8			900		213	11	14,700	4,500	19,200
HS	9-12				1854	229	9	11,800	6,200	18,000

*HS: additional classrooms per prior assessment; assumes some of additional stations added with library/pool renovations

PK | K-4 | 5-6 | 7-8 | 9-12

Maplewood MS as 5-6; SO MS as 7-8; expand HS

Option/b - budgets

3

Expansion Option/School	Est. Added Sq. Ft.	Est. \$/Sq. Ft.	Est. Renovation for Addition	Est. Hard Cost Budget	Est. Soft/ Site Costs	Est. Expansion Budget	
B	Clinton ES	3,500	\$350	\$ 175,000	\$ 1,400,000	\$ 455,000	\$ 1,855,000
	MMS	21,100	\$350	\$ 1,055,000	\$ 8,440,000	\$ 2,743,000	\$ 11,183,000
	SOMS	19,200	\$350	\$ 960,000	\$ 7,680,000	\$ 2,496,000	\$ 10,176,000
	HS	18,000	\$350	\$ 2,250,000	\$ 8,550,000	\$ 2,778,750	\$ 11,328,750
	61,800			\$ 26,070,000	\$ 8,472,750	\$ 34,542,750	
+	Physical Plant Deficiencies (Priority 1 only)			\$ 74,468,341	\$ 18,617,085	\$ 93,085,426	
=	Overall Total Budgets			\$ 100,538,341	\$ 27,089,835	\$ 127,628,176	

B - OPTION		Est. Hard Cost	Est. Soft Cost	Est. Budget
Optional	Expand Early Childhood (PK) to 188 students	\$ 2,680,000	\$ 871,000	\$ 3,551,000

Optional Total Budget - Including EC Expansion **\$ 131,179,176**

PK | K-4 | 5-6 | 7-8 | 9-12

Maplewood MS as 5-6; SO MS as 7-8; expand HS

- 1) Preliminary Budgets incl. hard + soft costs
- 2) Modular units removed



High Priority Facility Needs

April 2018

security
accessibility
windows
life safety
Security
Safety
Students
Highest priority
doors
roofing
accessibility
windows
life safety
doors
roofing

Enrollment/*history*

2

TABLE 2
SOUTH ORANGE MAPLEWOOD SCHOOL DISTRICT
STUDENT ENROLLMENT HISTORY

School Year	Births 5 Yrs. Ago	PK	K	1st Gr.	2nd Gr.	3rd Gr.	4th Gr.	5th Gr.	6th Gr.	7th Gr.	8th Gr.	9th Gr.	10th Gr.	11th Gr.	12th Gr.	UNGRADED	DISTRICT TOTAL
2012-13	565	0	555	524	541	522	541	533	494	510	434	511	475	434	414	100	6588
2013-14	513	19	545	570	527	545	510	541	533	509	516	474	450	486	415	112	6752
2014-15	514	16	543	566	568	534	535	506	547	529	511	546	446	454	447	111	6859
2015-16	461	50	552	569	571	561	533	534	500	534	526	526	498	427	421	70	6872
2016-17	458	89	545	557	562	561	550	548	523	503	536	544	470	497	392	63	6940
2017-18	429	108	528	545	566	562	553	554	536	519	501	535	527	451	486	67	7038
Average Survival Ratio		0.19	1.21	1.02	1.00	1.00	0.98	1.01	0.99	1.00	1.00	1.04	0.92	0.99	0.94		

NOTE: Only the last three years were used to compute the average birth to pre-kindergarten and birth to kindergarten survival ratio.

Enrollment/*projections*

2

STUDENT ENROLLMENT PROJECTIONS

School Year	Births 5 Yrs. Ago	PK	K	1st Gr.	2nd Gr.	3rd Gr.	4th Gr.	5th Gr.	6th Gr.	7th Gr.	8th Gr.	9th Gr.	10th Gr.	11th Gr.	12th Gr.	UNGRADED	DISTRICT TOTAL
2018-19	432	79	550	541	547	565	553	556	549	536	520	522	492	521	424	67	7021
		0.19		1.02	1.00	1.00	0.98	1.01	0.99	1.00	1.00	1.04	0.92	0.99	0.94		
2019-20	416	76	550	563	543	546	556	556	551	549	537	542	480	487	490	68	7093
2020-21	404	84	550	563	565	542	537	559	551	551	550	560	498	475	457	68	7111
2021-22	446	77	550	563	565	564	533	540	554	551	552	573	514	493	446	68	7146
22-23	410	77	550	563	565	564	555	536	535	554	552	575	527	509	463	68	7195

Options/*expansion*

1

A PK | K-4 | c 5 | 6-8 | 9-12

\$39.1 M

Jefferson as Central 5; expand ES's and HS

B PK | K-4 | 5-6 | 7-8 | 9-12

\$34.5 M

Maplewood MS as 5-6; SO MS as 7-8; expand HS

C PK | K-1,2 | 2,3-4 | c 5 | 6-8 | 9-12

\$40.7 M

*Spread various grades across ES's (K-1, 2-4, 3-4);
Central 5 at Fielding; expand various schools*

D PK | K-1,2 | 2,3-4 | c5 | 6-7 | c8 | 9-12 **\$64.8 M**

*Spread various grades across ES's (K-1, 2-4, 3-4);
Central 5 at Clinton; Central 8 at Fielding; expansions*

Options/*expansion*

E PK | K-2 | 3-4 | 5-7 | c8 | 9-12 **\$44.2M**

*Clinton/Tuscan become 3-4; MS's become 5-7;
Central 8 at Fielding; various expansions*

F PK | K-2 | 3-4 | 5-7 | c8 | 9-12 **\$46.8M**

*S. Mtn/Tuscan become 3-4; MS's become 5-7;
Central 8 at Fielding; various expansions*

G PK | K-4 | 5-7 | c8 | 9-12 **\$40.9M**

*MS's become 5-7; Central 8 created at S. Boyden;
expand various schools*



Enrollment/*pre-k*

2

PRE-SCHOOL UNIVERSE CALCULATIONS

District Factor Group:

Universal Districts = 1st Grade X 2 =

Targeted Districts = 1st Grade X 2 X % of free and reduced (K-12) =

Number of free and reduced lunches (K-12) =

Percent of free and reduced lunches =

YEAR	PK
ACTUAL	
12-13	0
13-14	19
14-15	16
15-16	50
16-17	89
17-18	108
PROJECTED	
18-19	79
19-20	76
20-21	84
21-22	77
22-23	77

NOTES:

1. The method for Pre-school universe calculations shown to the left above is that required by the NJDOE Pre-School Education Office.
2. The table to the right is a cohort survival calculation of regular pre-school enrollments as of the 2017-18 school year, exclusive of Pre-K handicapped. Pre-K handicapped students are accounted for with the "UNGRADED" students.
3. Please read the narrative concerning the Pre-school projections.